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ABSTRACT

Instructional Communications Systems (ICS), an academic support unit for the University of Wisconsin System, has been a leader in teleconferencing for more than 30 years. ICS personnel have been heavily involved with videoconferencing during the past 2-1/2 years, working with clientele at all of the various training levels--orientation, planning and preparation for single meetings and briefings, and multi-session program development and design. The training team developed a framework for working with clientele and for planning training sessions. The framework outlines seven critical areas that are essential to consider when planning to use videoconferencing. The "7 Keys to Success" include: (1) understanding the participants; (2) knowing the environment; (3) working as a team player; (4) developing formats and strategies; (5) creating interaction activities; (6) integrating support; and (7) monitoring for quality. These keys include all of the areas necessary to consider in videoconferencing: preplanning, development, design, management, assessment, and follow-up. The significance of interaction in videoconferencing has been validated by the University of Wisconsin faculty in training workshops. This paper includes a table presenting the Interactivity Spectrum and a diagram of the Interactivity Guide Pyramid. (AEF)

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# Videoconferencing Training Beyond the Keypad: Using the Interactive Potential

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## Introduction

Instructional Communications Systems (ICS), an academic support unit for the University of Wisconsin System, has been a leader in teleconferencing for more than thirty years. A unit of one of three University of Wisconsin-Extension divisions, ICS is located on the UW-Madison campus in historic Old Radio Hall. There is a great deal of excitement at Old Radio Hall these days. In just three months, ICS will be moving to its new state-of-the-art facility, the Pyle Center, where it will be able to expand its support work and technology training, and continue to reach out to faculty, government and the private sector statewide, nationally and internationally.

## ICS Training and Materials

At ICS, we work with the full spectrum of technologies: audioconferencing, audiographics, videoconferencing and computer assisted learning. Videoconferencing is an area in which ICS personnel have been heavily involved during the past two and a half years, working with clientele at all of the various training levels: 1) orientation, 2) planning and preparation for single meetings and briefings and 3) the more advanced level of multi-session program development and design.

During the course of our training experience, our training team has developed a framework for working with our clientele and for planning our training sessions. The framework is included in the Compressed Video materials we have developed and outlines seven critical areas that are essential to consider when planning to use videoconferencing. We call the framework "7 Keys to Success":

- Understanding Participants
- Knowing the Environment
- Working as a Team Player
- Developing Formats and Strategies
- Creating Interaction Activities
- Integrating Support
- Monitoring for Quality

## Interaction

These Keys take training "beyond the keypad" and include all of the areas necessary to consider in videoconferencing: preplanning, development, design, management, assessment



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and follow-up. At the center of the framework is the use and selection of appropriate interaction.

By its very nature, videoconferencing lends itself to two-way interaction and to the use of visuals. It's potential for interface with a wide variety of other technologies and media expands the interaction capability. Research literature supports the importance of interaction in distance learning. The field of cognitive and perceptual psychology provides a foundation for the significance of interaction in the learning process (Neisser, 1976, Gardner, 1985). Moore (1989) relates interaction to distance learning and outlines three types of interaction that take place in this environment. Gibson (1998) includes, in addition, the medium and learner context. Klivens (1994) and Mantyla and Gividen (1997) relate interaction specifically to videoconferencing and emphasize its significance in videoconferencing design. The significance of interaction in videoconferencing has also been validated by the University of Wisconsin faculty we have worked within our training workshops. We believe that the importance of interaction when using videoconferencing cannot be overemphasized.

There are many types of interaction to draw from. You have most likely used many of them in your face-to-face teaching and will be able to easily add to the activities we have used in our training. Table 1 is an Interactivity Spectrum that sorts the interaction activities into five categories and suggests five activities in each category. These activities vary in form from the very simple (using names, showing objects, Q & A ) to those that are much more complex (trigger videos, labs and field trips.) While the Interactivity Spectrum suggests activities that you can choose from, the Interactivity Guide Pyramid (Figure 1) helps you in the selection of the activities that will comprise a "well-balanced" program. Mavis Monson, who created the Pyramid says, "As you select from the Interactivity Guide, keep in mind the total context of the program. Sparingly choose from the Presentation Group (if one-way presentation). Use more generously if mixed with activities from the other groups."

**Table 1. Interactivity Spectrum**

| Present | Personalize | Show | Participate | Question |
|---|---|---|---|---|
| lecture | name use | objects | readings | Q & A |
| expert guest(s) | postcards | pictures | fax/e-mail | black box |
| interviews | bio-form | trigger video | groupwork | debates |
| case study | bio-booklet | particip. video | field trips | quizzes |
| storytelling | dialogue | simulation | lab sessions | fish bowl |

*Note.* Activities vary from the very simple to the very complex.

As we work through program development and design with our clients, we encourage them to develop their session content into short 10-15 minute modules that include appropriate interaction activities, well-prepared visuals and complementary print materials. The short modules bring variety to the sessions, the interaction activities engage and involve the participants and the visuals highlight the main points in the print materials.

**Figure 1. Interactivity Guide Pyramid.**

*Note.* Developed by Mavis Monson, UW-Extension, 1995, based on the Food Guide Pyramid (U.S. Dept. of Ag & U.S. Dept. of Health & Human Services, 1993).

Clients we have worked with have developed some very innovative programs that have engaged and involved their participants in meaningful activities. The Wisconsin Public Service Commission developed seminar sessions to explain new regulations and procedures and to train water utility personnel in their use. A second series of seminars addressed Rates and Accounting Issues and Consumer Issues. In all, nearly 500 participants were involved in this series. Interaction strategies that they used included role play, short presentations, collaboratively filling in sections of forms and Q & A.

Bell Atlantic Learning Labs developed scenarios that focused on training their technical personnel. One of the scenarios simulated checking power lines and outlets for power leaks, another focused on safety in climbing poles and described the proper boots to wear while on the job. A third scenario had the instructor at Bell Labs and participants at the other sites working on the installation of wires in junction boxes. The first two scenarios took place in the "interior neighborhoods" built inside of the Bell Labs training facilities and were followed by Q & A segments. In the third scenario, the junction boxes, wires and wire insertion tool were sent via FedEx to all of the sites. With the help of document cameras at each location, participants were able to practice inserting the wires into the junction boxes and at the same time give the instructor a closeup view so that it was possible for him to evaluate their proficiency. As we continue to work with academia, government and the private sector in videoconferencing, we are moving in the direction of workshops that go "beyond the keypad" and working more closely with program development and design that includes a focus on interaction activities.

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### Autobiographical Sketches

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ICS Videoconferencing Workshop Information is available at http://www.uwex.edu/disted/vcworkshop/